Mumbai University

Question Paper

[IDOL – Revised Course]
(December – 2017)

PAPER - I

Internet Technologies

Time: 3 Hours

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Total Marks: 100

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N.B.: (1) *All Question are Compulsory.*
    (2) *Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.*
    (3) *Answer To The Same Question Must Be Written Together.*
    (4) *Number To The Right Indicates Marks.*
    (5) *Draw Neat Labeled Diagrams Wherever Necessary.*
    (6) *Use of Non – Programmable Calculator is allowed.*

Q.1 ATTEMPT ANY TWO QUESTIONS: (10 MARKS)

(A)	Explain Output Module of TCP.	**(5)**
(B)	Write a note on Timers available in RIP.	**(5)**
(C)	Explain Class Full Addressing.	**(5)**
(D)	Explain IPv6 Base Header Format.	**(5)**

Q.2 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

(A)	Write a note on NAT (Network Address Translation)	**(5)**
(B)	Explain role of Presentation Layer.	**(5)**
(C)	Explain Supernetting with example.	**(5)**
(D)	State and explain Reassembly Module of IP Package.	**(5)**
(E)	Explain strategies for Transmission from IPv4 to IPv6.	**(5)**
(F)	Explain Unicast, Anycast and Multicast Address in IPv6.	**(5)**

Q.3 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

(A)	Explain Cache Control Module of ARP.	**(5)**
(B)	List and Explain Error Reporting Messages of ICMP.	**(5)**
(C)	Explain role of Foreign Agent and Home Agent in Mobile IP.	**(5)**
(D)	Explain the concept of Path Vector Routing.	**(5)**
(E)	Explain Two-Node Instability in RIP.	**(5)**
(F)	Explain various types of Links in OSPF.	**(5)**

Q.4 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

(A)	State and explain features of UDP.	**(5)**
(B)	Write and Explain Pseudo Code of Control-Block Module and Output Module of UDP.	**(5)**
(C)	Draw and explain TCP Segment Format.	**(5)**
(D)	Draw and explain Client State Transition diagram of TCP.	**(5)**
(E)	State and explain Services of SCTP.	**(5)**
(F)	Explain INIT Chunk of SCTP.	**(5)**

Q.5 ATTEMPT ANY THREE QUESTIONS: (15 MARKS)

(A)	Draw and explain DHCP Packet Format.	**(5)**
(B)	Explain Generic, Country and the Inverse Domain.	**(5)**
(C)	Explain the concept of NVT and NVT Character Set.	**(5)**
(D)	Explain in brief Components of SSH.	**(5)**
(E)	Explain in brief Communication Over Control Connection & Data Connection in FTP.	**(5)**
(F)	Explain different Messages of TFTP.	**(5)**

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QUESTION PAPER

INTERNET TECHNOLOGIES
(DECEMBER – 2017 | IDOL – REVISED COURSE)

B.Sc.IT
(SEMESTER – VI)

Q.6 **ATTEMPT ANY THREE QUESTIONS: (15 MARKS)**

(A) Explain in detail Hypertext and Hyper Media, Web Client(browser), Webserver, Uniform Resource **(5)** Locator.

(B) Explain Persistence and Nonpersistent Connection of HTTP. **(5)**

(C) Write a note on Message Transfer Agent of Email System. **(5)**

(D) Explain in detail the role of POP3 and IMAP4 in Email System. **(5)**

(E) Explain various Data Types and Subtypes in MIME. **(5)**

(F) Write a note on Audio Compression. **(5)**

Q.7 **ATTEMPT ANY THREE QUESTIONS: (15 MARKS)**

(A) Explain in detail constructors used to create DatagramSocket. **(5)**

(B) Write TCP socket program that will display whether a number is a prime or not. **(5)**

(C) Explain Socket class with its methods and properties. **(5)**

(D) Explain how UDP Socket Programming works? **(5)**

(E) Write UDP socket program that will display number of vowels in a string. **(5)**

(F) Write a Client/server application where a client contacts the server to obtain random number. Use **(5)** Socket and Server Socket.